

0920

#6

OIPE

RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/855,632

TIME: 11:38:30

Input Set : N:\Crf3\RULE60\09855632.txt

Output Set: N:\CRF3\12062001\I855632.raw

5 <110> APPLICANT: Reiter, Robert E.
7 Witte, Owen N.
9 Saffran, Douglas C.
13 <120> TITLE OF INVENTION: PSCA: PROSTATE STEM CELL ANTIGEN AND USES THEREOF
17 <130> FILE REFERENCE: 30435.54USI4
19 <140> CURRENT APPLICATION NUMBER: 09/855,632
21 <141> CURRENT FILING DATE: 2001-05-14
23 <150> PRIOR APPLICATION NUMBER: 09/564,329
25 <151> PRIOR FILING DATE: 2000-05-03
28 <150> PRIOR APPLICATION NUMBER: 09/359,326
30 <151> PRIOR FILING DATE: 1999-07-20
34 <150> PRIOR APPLICATION NUMBER: 08/814,279
36 <151> PRIOR FILING DATE: 1997-03-10
40 <150> PRIOR APPLICATION NUMBER: 60/071,141
42 <151> PRIOR FILING DATE: 1998-01-12
46 <150> PRIOR APPLICATION NUMBER: 60/074,675
48 <151> PRIOR FILING DATE: 1998-02-13
52 <150> PRIOR APPLICATION NUMBER: 60/113,230
54 <151> PRIOR FILING DATE: 1998-12-21
58 <150> PRIOR APPLICATION NUMBER: 60/120,536
60 <151> PRIOR FILING DATE: 1999-02-17
64 <150> PRIOR APPLICATION NUMBER: 60/124,658
66 <151> PRIOR FILING DATE: 1999-03-16
70 <150> PRIOR APPLICATION NUMBER: 09/038,261
72 <151> PRIOR FILING DATE: 1998-03-10
76 <150> PRIOR APPLICATION NUMBER: 09/203,939
78 <151> PRIOR FILING DATE: 1998-12-02
82 <150> PRIOR APPLICATION NUMBER: 09/251,835
84 <151> PRIOR FILING DATE: 1999-02-17
88 <150> PRIOR APPLICATION NUMBER: 09/308,503
90 <151> PRIOR FILING DATE: 1999-05-25
94 <160> NUMBER OF SEQ ID NOS: 27
98 <170> SOFTWARE: PatentIn Ver. 2.0
102 <210> SEQ ID NO: 1
104 <211> LENGTH: 998
106 <212> TYPE: DNA
108 <213> ORGANISM: HUMAN PSCA (hPSCA)
112 <220> FEATURE:
114 <221> NAME/KEY: misc_feature
116 <222> LOCATION: (543)
118 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
122 <220> FEATURE:
124 <221> NAME/KEY: misc_feature
126 <222> LOCATION: (580)
128 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
132 <220> FEATURE:
134 <221> NAME/KEY: misc_feature

ENTERED

RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/855,632

TIME: 11:38:30

Input Set : N:\Crf3\RULE60\09855632.txt

Output Set: N:\CRF3\12062001\I855632.raw

136 <222> LOCATION: (584)
 138 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 142 <220> FEATURE:
 144 <221> NAME/KEY: misc_feature
 146 <222> LOCATION: (604)
 148 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 152 <220> FEATURE:
 154 <221> NAME/KEY: misc_feature
 156 <222> LOCATION: (608)
 158 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 162 <220> FEATURE:
 164 <221> NAME/KEY: misc_feature
 166 <222> LOCATION: (615)
 168 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 172 <220> FEATURE:
 174 <221> NAME/KEY: misc_feature
 176 <222> LOCATION: (636)
 178 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 182 <220> FEATURE:
 184 <221> NAME/KEY: misc_feature
 186 <222> LOCATION: (640)
 188 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 192 <220> FEATURE:
 194 <221> NAME/KEY: misc_feature
 196 <222> LOCATION: (646)
 198 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 202 <220> FEATURE:
 204 <221> NAME/KEY: misc_feature
 206 <222> LOCATION: (697)
 208 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 212 <220> FEATURE:
 214 <221> NAME/KEY: misc_feature
 216 <222> LOCATION: (926)
 218 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 222 <400> SEQUENCE: 1

224 agggagagggc agtgaccatg aaggctgtgc tgcttgccct gttgatggca ggcttggccc 60
 226 tgcagccagg cactgccctg ctgtgctact cctgcaaagc ccaggtgagc aacgaggact 120
 228 gcctgcaggt ggagaactgc acccagctgg gggagcagtg ctggaccgcg cgcacccgcg 180
 230 cagttggcct cctgaccgtc atcagcaaag gctgcagctt gaactgcgtg gatgactcac 240
 232 aggactacta cgtgggcaag aagaacatca cgtgctgtga caccgacttg tgcaacgcca 300
 234 gcggggccca tgccctgcag ccggtgccc ccacacttgc gctgctccct gcaactcggc 360
 236 tgctgctctg gggaccggc cagctatagg ctctgggggg ccccgctgca gccacactg 420
 238 ggtgtggtgc ccaggcctt tgtgccactc ctacagaaac ctggcccagt gggagcctgt 480
 240 cctggttcct gaggcacatc ctaacgcaag tttgaccatg tatgtttgca ccccttttcc 540
 W--> 242 ccnaaccctg accttcccat gggccttttc caggattccn accnggcaga tcagtttttag 600
 W--> 244 tganacanat ccgcntgcag atggcccttc caaccntttt tgttgntgtt tccatggccc 660
 W--> 246 agcatttttc acccttaacc ctgtgttcag gcacttnttc ccccaggaag ccttccctgc 720
 248 ccacccatt tatgaattga gccaggtttg gtccgtggtg tccccgcac ccagcagggg 780
 250 acaggcaatc aggagggccc agtaaaggct gagatgaagt ggactgagta gaactggagg 840

RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/855,632

TIME: 11:38:30

Input Set : N:\Crif3\RULE60\09855632.txt

Output Set: N:\CRF3\12062001\I855632.raw

```

252 acaagagttg acgtgagttc ctgggagttt ccagagatgg ggcctggagg cctggaggaa 900
W--> 254 ggggccaggc ctcacatttg tggggntccc gaatggcagc ctgagcacag cgtaggccct 960
256 taataaacac ctgttgata agccaaaaaa aaaaaaaa 998
260 <210> SEQ ID NO: 2
262 <211> LENGTH: 123
264 <212> TYPE: PRT
266 <213> ORGANISM: HUMAN PSCA (hPSCA)
270 <220> FEATURE:
272 <221> NAME/KEY: SITE
274 <222> LOCATION: (50)..(64)
278 <220> FEATURE:
280 <221> NAME/KEY: SITE
282 <222> LOCATION: (71)..(82)
286 <220> FEATURE:
288 <221> NAME/KEY: SITE
290 <222> LOCATION: (67)..(81)
294 <400> SEQUENCE: 2
296 Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly Leu Ala Leu Gln
298   1           5           10           15
302 Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val Ser Asn
304           20           25           30
308 Glu Asp Cys Leu Gln Val Glu Asn Cys Thr Gln Leu Gly Glu Gln Cys
310           35           40           45
314 Trp Thr Ala Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
316           50           55           60
320 Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln Asp Tyr Tyr Val Gly
322  65           70           75           80
326 Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp Leu Cys Asn Ala Ser Gly
328           85           90           95
332 Ala His Ala Leu Gln Pro Ala Ala Ala Ile Leu Ala Leu Leu Pro Ala
334           100          105          110
338 Leu Gly Leu Leu Leu Trp Gly Pro Gly Gln Leu
340           115          120
346 <210> SEQ ID NO: 3
348 <211> LENGTH: 441
350 <212> TYPE: DNA
352 <213> ORGANISM: MURINE PSCA (mPSCA)
356 <400> SEQUENCE: 3
358 atgaagacag ttttttttat cctgctggcc acctacttag ccctgcatcc aggtgctgct 60
360 ctgcagtgct attcatgcac agcacagatg aacaacagag actgtctgaa tgtacagaac 120
362 tgcagcctgg accagcacag ttgctttaca tcgcgcatcc gggccattgg actcgtgaca 180
364 gttatcagta agggctgcag ctcacagtgt gaggatgact cggagaacta ctatttgggc 240
366 aagaagaaca tcacgtgctg ctactctgac ctgtgcaatg tcaacggggc ccacaccctg 300
368 aagccacca ccaccctggg gctgctgacc gtgctctgca gcctgttgct gtggggctcc 360
370 agccgtctgt aggctctggg agagcctacc atagcccgat tgtgaaggga tgagctgcac 420
372 tccacccac cccacacag g 441
376 <210> SEQ ID NO: 4
378 <211> LENGTH: 123
380 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/855,632

TIME: 11:38:30

Input Set : N:\Crf3\RULE60\09855632.txt

Output Set: N:\CRF3\12062001\I855632.raw

382 <213> ORGANISM: MURINE PSCA (mPSCA)

386 <400> SEQUENCE: 4

```

388 Met Lys Thr Val Phe Phe Ile Leu Leu Ala Thr Tyr Leu Ala Leu His
390   1           5           10           15
394 Pro Gly Ala Ala Leu Gln Cys Tyr Ser Cys Thr Ala Gln Met Asn Asn
396           20           25           30
400 Arg Asp Cys Leu Asn Val Gln Asn Cys Ser Leu Asp Gln His Ser Cys
402           35           40           45
406 Phe Thr Ser Arg Ile Arg Ala Ile Gly Leu Val Thr Val Ile Ser Lys
408           50           55           60
412 Gly Cys Ser Ser Gln Cys Glu Asp Asp Ser Glu Asn Tyr Tyr Leu Gly
414  65           70           75           80
418 Lys Lys Asn Ile Thr Cys Cys Tyr Ser Asp Leu Cys Asn Val Asn Gly
420           85           90           95
424 Ala His Thr Leu Lys Pro Pro Thr Thr Leu Gly Leu Leu Thr Val Leu
426           100          105          110
430 Cys Ser Leu Leu Leu Trp Gly Ser Ser Arg Leu
432           115          120

```

438 <210> SEQ ID NO: 5

440 <211> LENGTH: 131

442 <212> TYPE: PRT

444 <213> ORGANISM: HUMAN STEM CELL ANTIGEN (hSCA-2)

448 <400> SEQUENCE: 5

```

450 Met Lys Ile Phe Leu Pro Val Leu Leu Ala Ala Leu Leu Gly Val Glu
452   1           5           10           15
456 Arg Ala Ser Ser Leu Met Cys Phe Ser Cys Leu Asn Gln Lys Ser Asn
458           20           25           30
462 Leu Tyr Cys Leu Lys Pro Thr Ile Cys Ser Asp Gln Asp Asn Tyr Cys
464           35           40           45
468 Val Thr Val Ser Ala Ser Ala Gly Ile Gly Asn Leu Val Thr Phe Gly
470           50           55           60
474 His Ser Leu Ser Lys Thr Cys Ser Pro Ala Cys Pro Ile Pro Glu Gly
476  65           70           75           80
480 Val Asn Val Gly Val Ala Ser Met Gly Ile Ser Cys Cys Gln Ser Phe
482           85           90           95
486 Leu Cys Asn Phe Ser Ala Ala Asp Gly Gly Leu Arg Ala Ser Val Thr
488           100          105          110
492 Leu Leu Gly Ala Gly Leu Leu Leu Ser Leu Leu Pro Ala Leu Leu Arg
494           115          120          125
498 Phe Gly Pro
500           130

```

506 <210> SEQ ID NO: 6

508 <211> LENGTH: 123

510 <212> TYPE: PRT

512 <213> ORGANISM: HUMAN PSCA (hPSCA)

516 <400> SEQUENCE: 6

```

518 Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly Leu Ala Leu Gln
520   1           5           10           15
524 Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val Ser Asn

```

RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/855,632

TIME: 11:38:30

Input Set : N:\Crf3\RULE60\09855632.txt

Output Set: N:\CRF3\12062001\I855632.raw

```

526          20          25          30
530 Glu Asp Cys Leu Gln Val Glu Asn Cys Thr Gln Leu Gly Glu Gln Cys
532          35          40          45
536 Trp Thr Ala Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
538          50          55          60
542 Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln Asp Tyr Tyr Val Gly
544 65          70          75          80
548 Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp Leu Cys Asn Ala Ser Gly
550          85          90          95
554 Ala His Ala Leu Gln Pro Ala Ala Ala Ile Leu Ala Leu Leu Pro Ala
556          100          105          110
560 Leu Gly Leu Leu Leu Trp Gly Pro Gly Gln Leu
562          115          120
568 <210> SEQ ID NO: 7
570 <211> LENGTH: 123
572 <212> TYPE: PRT
574 <213> ORGANISM: MURINE PSCA (mPSCA)
578 <400> SEQUENCE: 7
580 Met Lys Thr Val Leu Phe Leu Leu Leu Ala Thr Tyr Leu Ala Leu His
582 1          5          10          15
586 Pro Gly Ala Ala Leu Gln Cys Tyr Ser Cys Thr Ala Gln Met Asn Asn
588          20          25          30
592 Arg Asp Cys Leu Asn Val Gln Asn Cys Ser Leu Asp Gln His Ser Cys
594          35          40          45
598 Phe Thr Ser Arg Ile Arg Ala Ile Gly Leu Val Thr Val Ile Ser Lys
600          50          55          60
604 Gly Cys Ser Ser Gln Cys Glu Asp Asp Ser Glu Asn Tyr Tyr Leu Gly
606 65          70          75          80
610 Lys Lys Asn Ile Thr Cys Cys Tyr Ser Asp Leu Cys Asn Val Asn Gly
612          85          90          95
616 Ala His Thr Leu Lys Pro Pro Thr Thr Leu Gly Leu Leu Thr Val Leu
618          100          105          110
622 Cys Ser Leu Leu Leu Trp Gly Ser Ser Arg Leu
624          115          120
630 <210> SEQ ID NO: 8
632 <211> LENGTH: 20
634 <212> TYPE: DNA
636 <213> ORGANISM: Artificial Sequence
640 <220> FEATURE:
642 <223> OTHER INFORMATION: Description of Artificial Sequence: RT-PCR PRIMER
646 <400> SEQUENCE: 8
648 ttctcctgct ggccacctac          20
652 <210> SEQ ID NO: 9
654 <211> LENGTH: 20
656 <212> TYPE: DNA
658 <213> ORGANISM: Artificial Sequence
662 <220> FEATURE:
664 <223> OTHER INFORMATION: Description of Artificial Sequence: RT-PCR PRIMER
668 <400> SEQUENCE: 9

```

VERIFICATION SUMMARY

DATE: 12/06/2001

PATENT APPLICATION: US/09/855,632

TIME: 11:38:31

Input Set : N:\Crf3\RULE60\09855632.txt

Output Set: N:\CRF3\12062001\I855632.raw

L:242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:244 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:246 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1